In The Claims

1. (Previously Presented) A method for determining the quality of milk, the method comprising the steps of:

examining a milk sample with a detector; and

applying an object recognition rule to the examined milk sample using a determination device, the object recognition rule including the steps of:

detecting an object in the milk sample;

distinguishing the object type as either a particle object or a non-particle object; and

distinguishing a particle object type as either a mineral particle object or a biological particle object.

2. (Previously Presented) The method according to claim 1, and further comprising the step of:

extracting the object from the sample with a controller.

3. (Canceled)

4. (Canceled)

5. (Previously Presented) The method according to claim 1, wherein the non-particle object type is a bubble object.

6. (Previously Presented) The method according to claim 1, wherein the step of detecting an object in the milk sample comprises the step of:

identifying a portion of interest of the milk sample with an identification device.

7. (Previously Presented) The method according to claim 1, wherein the step of detecting an object in the milk sample based on the object recognition rules comprises the step of:

locating a boundary of the object with the determination device.

8. (Previously Presented) The method according to claim 1, and further comprising the steps of:

specifying an object parameter for the object recognition rule; and

detecting that parameter in an object with the determination device.

9. (Previously Presented) The method according to claim 8, wherein the step of specifying the object parameter comprises the step of:

optically capturing the object parameter with an optical device.

10. (Previously Presented) The method according to claim 8, wherein the step of specifying the object parameter comprises the step of:

deriving the object parameter from optical lightness of the object with the determination device.

11. (Previously Presented) The method according to claim 8, wherein the step of specifying the object parameter for the object recognition rule comprises the step of:

deriving the object parameter from an outer contour of an object with the determination device.

12. (Previously Presented) The method according to claim 8, wherein the step of specifying the object parameter for the object recognition rule comprises the step of:

deriving the object parameter from contrast of the object with the determination device.

13. (Previously Presented) The method according to claim 8, the step of specifying the object parameter for the object recognition rule comprises the step of:

deriving the object parameter from a color of the object with the determination device.

14. (Previously Presented) The method according to claim 1, and further comprising the step of:

specifying a plurality of object parameters for the object recognition rule to determine an object type of a detected object using the determination device.

15. (Previously Presented) The method according to claim 1, and further comprising the step of:

employing fuzzy logic with the determination device to determine and vary a plurality of parameters for an object type of a detected object.

16. (Previously Presented) The method according to claim 1, and further comprising the step of:

performing gradient formation with the determination device in view of a physical quality wherein the physical quality is selected from the group consisting essentially of: hue, intensity, saturation, electrical conductivity, electrical capacity, reflection, transmission, and combinations thereof.

17. (Previously Presented) The method according to claim 1, and further comprising the step of:

determining a characteristic value of the object using the determination device.

18. (Previously Presented) The method according to claim 1, and further comprising the step of:

specifying an object parameter with the determination device for the object recognition rule that is detectable through incident lighting.

19. (Previously Presented) The method according to claim 1, and further comprising the steps of:

determining milk quality based on an object type using the determination device; and then selectively routing the milk to a marketable milk container or discarding the milk using a controller.

20. (Previously Presented) The method according to claim 1, and further comprising the steps of:

routing a predetermined quantity of milk into a measuring chamber using a controller; and

draining at least part of the liquid phase of the milk from the measuring chamber using the controller; and the step of examining the milk sample comprises the step of:

capturing an image of at least a portion of the measuring chamber surface with an optical device.

21. (Previously Presented) The method according to claim 1, wherein the step of:

examining a milk sample comprises the steps of:

routing a predetermined quantity of milk across a measuring chamber surface, on which a film is formed using a controller; and

capturing an image of the measuring chamber surface using an optical device.

22. (Previously Presented) The method according to claim 1, and further comprising the step of:

removing the object from the milk sample with an extractor.

23. (Previously Presented) The method according to claim 1, and further comprising the step of:

determining a frequency of object detections of for individual object types using the determination device.

24. (Previously Presented) The method according to claim 1, and further comprising the step of:

deriving a milk quality grade from a detection frequency for individual object types using the determination device.

25. (Withdrawn) A method for recognizing objects in milk, characterized in that a milk sample to be examined is routed onto a measuring surface and an image of the measuring surface is captured, and at least one object recognition rule is employed to distinguish between at least two types of detected objects.

26. (Withdrawn) The method of claim 25 wherein particles are detected.

27. (Withdrawn) A device for determining the quality of milk, comprising:

a measuring chamber into which a sample can be routed;

a detector means for capturing at least a portion of the measuring chamber; and

a determination means which is suitable for determining a type of an object in the sample on the basis of at least one predefined object recognition rule.

28. (Withdrawn) The device according to claim 27, characterized by an identification means to identify at least one portion of interest which portion of interest is characteristic for an object.

29. (Withdrawn) The device according to claim 27, characterized by an extraction means for extracting a fault image from an image of the sample and a reference image wherein the fault image is employed for determining the at least one parameter.

30. (Withdrawn) The device according to claim 27, characterized in that a selection unit is provided such that depending on the quality, the milk is either routed to the marketable milk container or it is discarded.

31. (Withdrawn) The method according to claim 27, characterized in that at least a predetermined quantity of milk is routed into a measuring chamber having at least one capturing unit, at least part of the liquid phase of the milk in the measuring chamber is then drained out of the measuring chamber and then at least a portion of the measuring chamber surface is captured.

32. (Withdrawn) A method for providing a classification database for classifying objects in milk comprising the following steps:

providing a reference image of a milk sample;

providing at least one image of at least one object;

extracting at least one fault image from the reference image and the image of an object;

providing a typing code;

determining characteristic properties of objects in the fault image; and

storing the characteristic properties to an object type of the typing code.

33. (Previously Presented) The method according to claim 1, wherein the non-particle object type is a reflection object.

34. (Previously Presented) The method according to claim 1, wherein the non-particle object type is a defect object.

35. (Previously Presented) The method according to claim 1, and further comprising the step of:

specifying an object parameter for the object recognition rule that is detectable through a transmissive read method.

36. (Previously Presented) The method according to claim 1, and further comprising the step of:

deriving a milk quality grade from an object detection frequency for individual object sizes.

37. (Previously Presented) The method according to claim 1, and further comprising the steps of:

distinguishing the object from a defect; and

excluding the defect from being considered by the object recognition rule.